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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,521	09/23/2004	Efthimios Papayianis	2002-007	5520
32170	7590	06/30/2008		
U.S. ARMY TACOM-ARDEC			EXAMINER	
ATTN: AMSTRA-AR-GCL			CLEMENT, MICHELLE RENEE	
BLDG 3				
PICATINNY ARSENAL, NJ 07806-5000			ART UNIT	PAPER NUMBER
			3641	
			MAIL DATE	DELIVERY MODE
			06/30/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/711,521	PAPAYIANIS ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Michelle (Shelley) Clement	3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 April 2008.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 7-11 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 7-11 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.                                                         | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection as necessitated by applicant's amendments.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ingersoll (US Patent # 5,390,604) in view of Cole (US Patent # H776) and Will et al. (US Patent # 5,886,287). Ingersoll discloses a method of determining the time to a desired height of burst of a projectile comprising the steps of determining the time that it takes the projectile to reach its apex after launch and calculating the time to the desired time of burst based upon the time. Wherein the time to the desired time of burst is a percentage of the time that it takes the projectile to reach its apex. Although Ingersoll does not expressly disclose the method including measuring the time that it takes the projectile to reach its apogee after launch, Cole does. Cole teaches a method of measuring the time that it takes a projectile to reach its apogee after launch. Ingersoll and Cole are analogous art because they are from the same field of endeavor: projectile fuzes. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of measuring the time that it takes a projectile to reach it apogee after launch as suggested by Cole with the method of determining the time to a desired Height of

Burst as suggested by Ingersoll. The suggestion/motivation for doing so would have been to obtain a faster method of determining the time to a desired height of burst. Although neither Ingersoll nor Cole expressly disclose the steps of determining, through the effect of a sensor onboard the projectile, when the projectile reaches its apogee after launch, wherein the on-board sensor is an accelerometric sensor. All of the component parts are known in the references. The only difference is the combination of the “old elements” into a single device. Thus, it would have been obvious to one having ordinary skill in the art to mount the accelerometer taught by Will et al. and utilize the output in the determining step in the method shown in Ingersoll and Cole, since the operation of the accelerometer is in no way dependent on the operation of the other equipment of the fuze, and an accelerometer could be used in combination with a standard fuze to achieve the predictable results of sensing when the projectile reaches its apogee.

4. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ingersoll in view of Cole and Will et al. as applied to claims 7 and 8 above. Ingersoll, Cole and Will et al. disclose the claimed invention except for the specific percentages and the specific height. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the specific percentages and specific height, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle (Shelley) Clement whose telephone number is 571.272.6884. The examiner can normally be reached on Monday thru Thursday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571.272.6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michelle (Shelley) Clement/  
Primary Examiner, Art Unit 3641